

We Claim:

1. A blood separation assembly comprising
a blood processing chamber comprising a base
including formed walls that define a separation channel, and
a centrifuge rotor rotatable about a rotational
axis, the centrifuge rotor including a latch assembly
including a latch arm pivotally mounted on the centrifuge
rotor for movement between a chamber-retaining position
engaging the blood processing chamber, to secure the blood
processing chamber to the centrifuge rotor, and a chamber-
releasing position free of engagement with the blood
processing chamber, to enable removal of the blood
processing chamber from the centrifuge rotor, and a pawl
movable on the centrifuge rotor between a first position
adjacent the latch arm and a second position spaced from the
latch arm, the pawl including a locking element that engages
the latch arm when the latch arm is in the chamber-retaining
position to resist movement of the latch arm toward the
chamber-releasing position, and a spring coupled to the pawl
to bias the pawl toward the first position.

2. An assembly according to claim 1

wherein the formed walls of blood processing
chamber include an annular lip, and

wherein the latch assembly includes an annular
grove on the centrifuge rotor sized to mate with the annular
lip, the latch arm including a groove that coincides with
the annular groove when the latch arm is in the chamber-
retaining position and that interrupts the annular groove
when the latch arm is in the chamber-releasing position.

3. An assembly according to claim 1

wherein the pawl includes a key element that
moves in concert with the pawl, and

further including a collar mounted for rotation
relative to the centrifuge rotor about the rotational axis,
the collar including a sidewall that interferes with the key
element to prevent movement of the pawl from the first
position toward the second position, the collar including a

cut away region that moves into and out of mutual alignment with the key element during rotation of the centrifuge rotor relative to the collar, the cut away region being sized to permit passage of the key element in response to movement of the pawl from the first position toward the second position when the key element and cut away region are in mutual alignment.

4. An assembly according to claim 1

wherein the blood processing chamber comprises a molded base assembly defining a hub about which the separation channel circumferentially extends, and at least one radial passage that directs fluid between the hub and the separation channel.

5. A blood separation assembly comprising

a frame rotatable about a rotational axis,

a rotor carried by the frame for relative rotation about the rotational axis,

a blood processing chamber comprising a base including formed walls that define a separation channel, and

a latch assembly on the rotor including a latch arm mounted for movement between a chamber-retaining position engaging the blood processing chamber to secure the blood processing chamber to the rotor for common rotation therewith relative to the frame and a chamber-releasing position free of engagement with the blood processing chamber to enable removal of the blood processing chamber from the rotor.

6. An assembly according to claim 5

wherein the latch assembly includes a pawl movable on the rotor between a first position adjacent the latch arm and a second position spaced from the latch arm, the pawl including a locking element that engages the latch arm when the latch arm is in the chamber-retaining position to resist movement of the latch arm toward the chamber-releasing position, and a spring coupled to the pawl to bias the pawl toward the first position.

7. An assembly according to claim 6

